

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/006720

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ B23B13/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ B23B13/12

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2005
Kokai Jitsuyo Shinan Koho	1971-2005	Toroku Jitsuyo Shinan Koho	1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2003-39215 A (Seiko Epson Corp.), 12 February, 2003 (12.02.03), Fig. 4 (Family: none)	1-8, 13-19
X	JP S48-13890 U (Kaneriki OYA), 16 February, 1973 (16.02.73), Fig. 1 (Family: none)	1-2, 9-10, 13-19
X	JP 9-225702 A (Kabushiki Kaisha Tsugami), 02 September, 1997 (02.09.97), Fig. 11 (Family: none)	1-2, 11-19

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

- A" document defining the general state of the art which is not considered to be of particular relevance
- E" earlier application or patent but published on or after the international filing date
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- P" document published prior to the international filing date but later than the priority date claimed

-T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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-&- document member of the same patent family

Date of the actual completion of the international search
07 June, 2005 (07.06.05)Date of mailing of the international search report
21 June, 2005 (21.06.05)Name and mailing address of the ISA/
Japanese Patent Office

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP S60-172602 U (Seikichi KUMAKURA), 15 November, 1985 (15.11.85), Fig. 3 (Family: none)	1-19